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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/608,784

Applicant(s)

STEINBERG ET AL.

Examiner

Kathleen S. Yuan

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15,23-33,41-55,63-73 and 81-112 is/are pending in the application.
- 4a) Of the above claim(s) 16-22,34-40,56-62 and 74-80 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15,23-33,41-55,63-73 and 81 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

The response received on 11/19/2007 has been placed in the file and was considered by the examiner. An action on the merit follows.

Response to Amendment

1. The amendments filed on 19 November 2007 have been fully considered.

Response to these amendments is provided below.

Summary of Amendments/ Arguments and Examiner's Response:

2. The Applicant has amended/ added new claims to exclude some of the options disclosed in prior art.
3. *The applicant argues that Krishnamurthy discloses optional zooming, thus modifying a spatial parameter. The spatial parameter limitation is deleted, so according to the applicant, Krishnamurthy does not apply.*
4. The examiner disagrees. The claim still recites modifying location, position, orientation, and focus which can also be applied to the concept of zooming. Thus, those claims that omit "spatial parameter" are still rejected on the same art.
5. *The applicant in new claims copied the previous claims but omitted the "relationship between two or more facial features" as an option for determining the group of pixels, which the previous rejection relied upon.*
6. Even though the applicant has omitted the "relationship between two or more facial features" limitation in the claim, Toyama still teaches, "a correlation with a stored

standard," since Toyama teaches finding the relationship between facial features by correlating facial features to a stored standard.

Claim Objections

7. Claims 6, 46, 24 and 64 are objected to because of the following informalities: The wording does not make a correct sentence. Currently, the claim reads as if the selected portion comprises a zoom region and a new image, which the examiner does not believe is the applicant's intention. Furthermore, the sentence adds a verb, essentially saying all together, "the selected portion further comprises a zoon region and a new image comprising a zoomed image *includes...*" The added "includes" has no place in the sentence because there is already a verb, "comprises" for that part of the sentence. By adding a comma between "zoom region" and "a new image" the sentence is complete and readable. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-15, 23-33, 41-55, 63-73 and 81-112 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claims 1, 23, 41, 63, 85, 92, 99 and 106, the claims recite the limitation, "the group of pixels" in lines 14, 14, 15, 16, 12, 13, 14 and 14, respectively. There is insufficient antecedent basis for this limitation in the claim. Previously, the claims recite the limitations of the one or more groups of pixels. The group of pixels is being interpreted as the one or more group of pixels; however, appropriate correction is required.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims rejected under 35 U.S.C. 103(a) as being unpatentable over 1-6, 23, 24, 41-46, 63, 64, 81-89, 92, 93, 99-103, 106 and 112 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 20030123751 (Krishnamurthy et al) in view of U.S. Patent No. 6792135 (Toyama) in view of U.S. Patent No. 4970663 (Bedell et al).

Regarding claim 23, Krishnamurthy et al discloses a method of providing an option for generating one or more new still images using an original still image including a face, using individual frames in the processing of video, thus using a still image (page 1, paragraph 12), comprising (a) identifying one or more groups of pixels that correspond to a face, since the region of interest is of facial areas (pg. 1, pp. 0009)

within the original acquired image, (b) selecting a portion of the original still image for processing to include the group of pixels, wherein the portion selected is the region of interest of the original image, thus including the group of pixels (fig. 2 items 220-230) in order to utilize the data for other purposes such as finding a higher resolution for that region or adjusting the bit allocations, wherein the selection is based on the identifying of the one or more groups of pixels that correspond to a face (the previous step of item 210, fig. 2) and at least on information relating to location and position of the face in the image, since the group of pixels that are selected are the pixels that are in the position of the located face; and (c) automatically providing an option for generating values of pixels of one or more new still images by optionally applying zooming in on the region of interest, thus creating a new image based on the region of interest, the selected portion, which includes the face because the region of interest includes the face (pg. 5, pp 0053). The new images differ from the original still image by including at least one group of pixels modified by a focus, location and position, because the face's location and proximity are both changed/ closer to the camera, since the camera zooms in (pg. 5, pp 0053 and fig. 2, item 240), and modified by focus since the new image focuses in on a region interest.

Krishnamurthy et al does not disclose expressly that the region of interest is found by determining within the one or more groups of pixels (i) a relationship between two or more facial features, (ii) a structurally-invariant facial feature, or (iii) a correlation with a stored standard or learned face pattern, of the one or more groups of pixels, or combinations thereof, and that original image is digitally acquired. Krishnamurthy

instead relies on using user inputs and voice detection within the region of interest (fig. 3).

Toyama discloses further finding a facial region of interest by finding within a group of pixels a relationship between two or more facial features (fig. 8 and col. 9, lines 37-47). Toyama further discloses finding a facial region of interest by finding a correlation with a stored standard, the relational template which express where facial features are located ordinarily (fig. 8, item 816) which is stored because it is part of the program/ system of fig. 2, and programs are stored in a memory (fig. 1, item 104).

Krishnamurthy et al and Toyama are combinable because they are from the same field of endeavor, locating faces.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a relational aspect to help find a face.

The suggestion/motivation for doing so would have been to provide a more automatic, efficient and reliable face detection method, especially in the case of illumination changes.

Krishnamurthy et al (as modified by Toyama) does not disclose expressly that the original image is digitally acquired.

It is obvious if not inherent to use digital images, and further, Bedell et al discloses that original images input are digital (col. 2, lines 38-40).

Krishnamurthy et al and Bedell et al are combinable because they are from the same field of endeavor, i.e. manipulating images.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use digital images.

The suggestion/motivation for doing so would have been to provide a simple, well-known straightforward way of representing values in an image.

Therefore, it would have been obvious to combine the method of Krishnamurthy et al with the relational template of Toyama and the digital images of Bedell to obtain the invention as specified in claim 23.

13. Claim 63 is rejected for the same reasons as claim 23. Thus, the arguments analogous to that presented above for claim 23 are equally applicable to claim 63.

Claim 63 distinguishes from claim 23 only in that claim 23 claims a method and claim 63 claims a computer readable medium with a program. Toyama teaches further this feature (col. 4, line 62- col. 5, line 10).

14. Claim 1 and 41 are rejected for the same reasons as claims 23 and 63, respectively. Thus, the arguments analogous to that presented above for claims 23 and 63 are equally applicable to claims 1 and 41. Claims 1 and 41 distinguish from claims 23 and 63 only in that claims 1 and 41 are broader versions of claims 23 and 63, respectively. Since all the limitations are addressed in the previous rejections, prior art applies.

15. Claims 85 and 99 are rejected for the same reasons as claims 1 and 41, respectively. Thus, the arguments analogous to that presented above for claims 1 and 41 are equally applicable to claims 85 and 99. Claims 85 and 99 distinguish from claims 1 and 41 only in that claims 85 and 99 omit the limitation of "a relationship

between two or more facial features" and adds the limitation of spatial parameters.

Since Toyama also discloses ii) a correlation with a stored standard (as explained in the claim rejection above) and further discloses modifying spatial parameters of the face, since the image is zoomed, prior art equally applies.

16. Claims 92 and 106 are rejected for the same reasons as claims 23 and 63, respectively. Thus, the arguments analogous to that presented above for claims 1 and 41 are equally applicable to claims 92 and 106. Claims 92 and 106 distinguish from claims 1 and 41 only in that claims 92 and 106 omit the limitation of "a relationship between two or more facial features" and adds the limitation of spatial parameters.

Since Toyama also discloses ii) a correlation with a stored standard (as explained in the claim rejection above) and further discloses modifying spatial parameters of the face, since the image is zoomed, prior art equally applies.

17. Regarding claim 2, Krishnamurthy et al discloses displaying the original image since a viewer interactively defines areas of the original image, thus it must be displayed (pg. 4, pp. 0046) and displaying the final image, a zoomed image (pg. 4, pp. 0046 and pg. 5, pp. 0061). Krishnamurthy also discloses displaying a transformation between these images by displaying the zoomed image (pg. 5, pp.0061), thus displaying the enlarged change of the new image. Bedell et al discloses displaying another type of transformation between the images when disclosing that images can be dissolved from one image to another (col. 4, lines 19-20).

18. Regarding claim 3, Krishnamurthy discloses adjusting parameters of the transformation by zooming, thus adjusting the scale of the image, and adjusting the

resolution as well which is another parameter (fig. 2, item 220 and 240). Bedell et al discloses adjusting parameters of the transformation when disclosing that dissolving can be adjusted using parameters such as a constant k over a number of frames (col. 4, lines 21-25).

19. Regarding claim 4, Bedell et al discloses that parameters of said transformation between images are being selected from a set of criteria including timing, the number of frames it takes to dissolve and blending, the blending of the frames as one frame dissolves into another (col. 4, lines 21-25).

20. Regarding claim 5, Bedell et al discloses blending includes dissolving (col. 4, lines 19-20).

21. Regarding claim 6, Krishnamurthy discloses wherein the selected portion, or the region of interest (fig. 2, item 210), further comprises a zoom region, since the region of interest is zoomed in on, (fig. 2, item 240), and a new image comprising a zoomed image includes the face enlarged by the zooming (fig. 2, item 240), since the face is included in the region of interest (pg. 1, pp. 0009).

22. Claims 42-46 are rejected for the same reasons as claims 2-6, respectively. Thus, the arguments analogous to that presented above for claims 2-6 are equally applicable to claims 42-46. Claims 42-46 distinguish from claims 2-6 only in that they have different dependencies, both of which have been previously rejected. Therefore, prior art applies.

23. Claims 86-89 are rejected for the same reasons as claims 2-5, respectively. Thus, the arguments analogous to that presented above for claims 2-5 are equally

applicable to claims 86-89. Claims 86-89 distinguish from claims 2-5 only in that they have different dependencies, both of which have been previously rejected. Therefore, prior art applies.

24. Claims 99-103 are rejected for the same reasons as claims 2-5, respectively. Thus, the arguments analogous to that presented above for claims 2-5 are equally applicable to claims 99-103. Claims 99-103 distinguish from claims 2-5 only in that they have different dependencies, both of which have been previously rejected. Therefore, prior art applies.

25. Claims 24 and 64 are rejected for the same reasons as claim 6. Thus, the arguments analogous to that presented above for claim 6 are equally applicable to claims 24 and 64. Claims 24 and 64 distinguish from claim 6 only in that they have different dependencies, both of which have been previously rejected. Therefore, prior art applies.

26. Claim 93 is rejected for the same reasons as claim 6. Thus, the arguments analogous to that presented above for claim 6 are equally applicable to claim 93. Claim 93 distinguishes from claim 6 only in that they have different dependencies, both of which have been previously rejected, and the wording is different. The interpretation of the wording can be shared to mean the same thing in claims 6 and 93, since the wording has been objected to above. Therefore, prior art applies.

27. Regarding claim 81, Krishnamurthy et al discloses that the one or more new still images comprise a plurality of new still images by showing there is a new zoomed

image (fig. 2, item 240 as well as a composited image (fig. 2, item 250), thus producing a plurality of new still images.

28. Claims 82-84 and 112 are rejected for the same reasons as claim 81. Thus, the arguments analogous to that presented above for claim 81 are equally applicable to claims 82-84 and 112. Claims 82-84 and 112 distinguish from claim 81 only in that they have different dependencies, both of which have been previously rejected. Therefore, prior art applies.

29. Claims 7, 11, 25, 29, 47, 51, 65 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnamurthy et al in view of Toyama and Bedell et al, as applied to claims 6, 46, 24, 64, 89, 99, 92, 93 and 106 above, and further in view of U.S. Patent No.6246779 (Fukui et al).

Regarding claim 7, Krishnamurthy et al (as modified by Toyama and Bedell et al) discloses all of the claimed elements as set forth above, and incorporated herein by reference.

Krishnamurthy et al (as modified by Toyama and Bedell et al) does not disclose expressly determining a point of rotation and an amount of rotation after which another image is automatically generated including a rotated version of the face.

Fukui et al discloses determining a point of rotation, a rotation pivot point (col. 7, line 31) and an amount of rotation theta (col. 7, line 40) after which another image is automatically generated including a rotated, transformed version of the face (col. 7, lines 41- col. 8, line 4).

Krishnamurthy et al (as modified by Toyama and Bedell et al) and Fukui et al are combinable because they are from the same field of endeavor, i.e. facial image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to rotate the face.

The suggestion/motivation for doing so would have been to provide a more user-friendly system by providing a means to obtain a normalized version of the face which can be used in more effectively in many applications such as image matching, or simply be used as a better fit to the display.

Therefore, it would have been obvious to combine the method of Krishnamurthy et al (as modified by Toyama and Bedell et al) with the rotation of Fukui et al to obtain the invention as specified in claim 7.

30. Claims 25, 47, 65, 90 and 94 are rejected for the same reasons as claim 7. Thus, the arguments analogous to that presented above for claim 7 are equally applicable to claims 25, 47, 65, 90 and 94. Claims 25, 47, 65, 90 and 94 distinguish from claim 7 only in that they have different dependencies, both of which have been previously rejected. Therefore, prior art applies.

31. Regarding claim 11, Fukui et al discloses a step of determining a point of rotation, a rotation pivot point (col. 7, line 31) and an amount of rotation θ (col. 7, line 40) such that the generating of the values of the pixels automatically generates a new image, a transformed version of the face, including a rotated version of the face by

rotating the image about said point of rotation by said amount of rotation (col. 7, lines 41- col. 8, line 4).

32. Claims 29 and 96 are rejected for the same reasons as claim 11. Thus, the arguments analogous to that presented above for claim 11 are equally applicable to claims 29 and 96. Claims 29 and 96 distinguishes from claim 11 only in that claims 29 and 96 provide an option to generate a new image. Krishnamurthy teaches further this feature, i.e. providing an option to transform the image any way the user wishes (fig. 2, items 230-250 and pg. 5, paragraph 0053).

33. Claims 51, 104 and 69, 107 are rejected for the same reasons as claims 11 and 29, respectively. Thus, the arguments analogous to that presented above for claims 11 and 29 are equally applicable to claims 51, 104 and 69, 107. Claims 51, 104 and 69, 107 distinguish from claims 11 and 29 only in that they have different dependencies, both of which have been previously rejected. Therefore, prior art applies.

34. Claims 8, 9, 14, 15, 26, 27, 32, 33, 48, 49, 54, 55, 66, 67, 72, 73, 91, 95, 98, 105, 110 and 111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnamurthy et al in view of Toyama and Bedell et al, as applied to claims 6, 46, 23, 24, 63, 64, 89, 99, 92, 93 and 106 above, and further in view of U.S. Patent Application Publication No. 20030142209 (Yamazaki et al).

Regarding claim 8, Krishnamurthy et al (as modified by Toyama and Bedell et al) discloses all of the claimed elements as set forth above, and incorporated herein by reference.

Krishnamurthy et al (as modified by Toyama and Bedell et al) does not disclose expressly (d) determining one or more further new images each including a new group of pixels corresponding to the face; and (e) automatically panning using the one or more further new images.

Yamazaki et al discloses determining one or more further new images each including a new group of pixels corresponding to the face by obtaining more images over time that include the face (fig. 3, item 3-3 to 3-5). And automatically panning using one or more further new images, as can be seen in items 3.3 to 3.5, since the person moves and the camera keeps the person in the center, thus panning (pg. 2, pp. 21).

Krishnamurthy et al (as modified by Toyama and Bedell et al) and Yamazaki et al are combinable because they are from the same field of endeavor, i.e. facial image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to pan in new images.

The suggestion/motivation for doing so would have been to provide a more user-friendly system by automatically following an object of interest instead of manually following, and to increase speed by following the object instead of asking the user to find the object when it moves.

Therefore, it would have been obvious to combine the method of Krishnamurthy et al (as modified by Toyama and Bedell et al) with Yamazaki et al to obtain the invention as specified in claim 8.

35. Regarding claim 14, Yamazaki et al discloses generating of the values by generating one or more new images (fig. 2, items 3-3 to 3-5) each including a new group of pixels corresponding to the face, the face being shown in fig. 2, items 3-3 to 3-5 and the new group of pixels being the changes in the face in the new images, and further comprising the step of generating a panning sequence (pg. 2, pp. 21) which keeps the object of interest in the center, comprising a sequence of at least two of the original images (fig. 3, items 3-2 to 3-3) and the one or more new images (fig. 3-4).

36. Regarding claim 9, Yamazaki et al discloses each of the one or more further new images including pixels corresponding to features different from at least one other image of the one or more further new images, such features being the differences in the image from movement, such as the movement of the door and the pixels corresponding to the movement (fig. 3, items 3-2 to 3-5).

37. Claims 26 and 95 are rejected for the same reasons as claim 8. Thus, the arguments analogous to that presented above for claim 8 are equally applicable to claims 26 and 95. Claims 26 and 95 distinguishes from claim 8 only in that claims 26 and 95 provide options for continuing processing. Krishnamurthy teaches further this feature, i.e. providing an option to transform the image any way the user wishes (fig. 2, items 230-250 and pg. 5, paragraph 0053).

38. Claim 32 and 98 are rejected for the same reasons as claim 14. Thus, the arguments analogous to that presented above for claim 14 are equally applicable to claim 32. Claim 32 distinguishes from claim 14 only in that claim 32 provides options for continuing processing. Krishnamurthy teaches further this feature, i.e. providing an

option to transform the image any way the user wishes (fig. 2, items 230-250 and pg. 5, paragraph 0053).

39. Claims 48/91, 66, 54 and 72/110 are rejected for the same reasons as claims 8, 26, 14 and 32, respectively. Thus, the arguments analogous to that presented above for claims 8, 26, 14 and 32 are equally applicable to claims 48/91, 66, 54 and 72/110. Claims 48/91, 66, 54 and 72/110 distinguish from claims 8, 26, 14 and 32 only in that they have different dependencies, both of which have been previously rejected.

Therefore, prior art applies.

40. Claims 15, 27, 33, 49, 55, 67, 73 and 111 are rejected for the same reasons as claim 9. Thus, the arguments analogous to that presented above for claim 9 are equally applicable to claims 15, 27, 33, 49, 55, 67, 73 and 111. Claims 15, 27, 33, 49, 55, 67, 73 and 111 distinguish from claim only in that they have different dependencies, all of which have been previously rejected. Therefore, prior art applies.

41. Claim 105 is rejected for the same reasons as claim 14. Thus, the arguments analogous to that presented above for claim 14 are equally applicable to claim 105. Claim 105 distinguishes from claim 14 only in that they have different dependencies, all of which have been previously rejected. Therefore, prior art applies.

42. Claims 10, 12, 13, 28, 30, 31, 50, 52, 53, 68, 70, 71, 97, 108 and 109 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnamurthy et al in view of Toyama and Bedell et al as applied to claims 6, 46, 24, 64, 89, 99, 92 and 106 above,

and further in view Yamazaki et al, as applied to claims 8, 48, 26 and 66 and Fukui et al as applied to claims 11, 51, 29, 69, 96 and 107.

Regarding claim 10, Krishnamurthy et al (as modified by Toyama and Bedell et al and Yamazaki et al) discloses all of the claimed elements as set forth above, and incorporated herein by reference.

Krishnamurthy et al (as modified by Toyama, Bedell et al and Yamazaki et al) does not disclose expressly determining a point of rotation and an amount of rotation after which another image is automatically generated including a rotated version of the face.

Fukui et al discloses determining a point of rotation, a rotation pivot point (col. 7, line 31) and an amount of rotation θ (col. 7, line 40) after which another image is automatically generated including a rotated, transformed version of the face (col. 7, lines 41- col. 8, line 4).

Krishnamurthy et al (as modified by Toyama, Bedell et al and Yamazaki et al) and Fukui et al are combinable because they are from the same field of endeavor, i.e. facial image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to rotate the face.

The suggestion/motivation for doing so would have been to provide a more user-friendly system by providing a means to obtain a normalized version of the face which can be used more effectively in many applications such as image matching, or simply be used as a better fit to the display.

Therefore, it would have been obvious to combine the method of Krishnamurthy et al (as modified by Toyama, Bedell et al and Yamazaki et al) with Fukui et al to obtain the invention as specified in claim 10.

43. Claims 28, 50 and 68 are rejected for the same reasons as claim 10. Thus, the arguments analogous to that presented above for claim 10 are equally applicable to claims 28, 50 and 68. Claims 28, 50 and 68 distinguish from claim 10 only in that they have different dependencies, all of which have been previously rejected. Therefore, prior art applies.

44. Regarding claim 12, Krishnamurthy et al (as modified by Toyama, Bedell et al and Fukui et al) discloses all of the claimed elements as set forth above, and incorporated herein by reference. Krishnamurthy et al (as modified by Toyama, Bedell et al and Fukui et al) does not disclose expressly (d) determining one or more further new images each including a new group of pixels corresponding to the face; and (e) automatically panning using the one or more further new images. Yamazaki et al discloses determining one or more further new images each including a new group of pixels corresponding to the face by obtaining more images over time that include the face (fig. 3, item 3-3 to 3-5). And automatically panning using one or more further new images, as can be seen in items 3.3 to 3.5, since the person moves and the camera keeps the person in the center, thus panning (pg. 2, pp. 21). Krishnamurthy et al (as modified by Toyama, Bedell et al and Fukui et al) and Yamazaki et al are combinable because they are from the same field of endeavor, i.e. facial image processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art

to pan in new images. The suggestion/motivation for doing so would have been to provide a more user-friendly system by automatically following an object of interest instead of manually following, and to increase speed by following the object instead of asking the user to find the object when it moves. Therefore, it would have been obvious to combine the method of Krishnamurthy et al (as modified by Toyama, Bedell et al and Fukui et al) with Yamazaki et al to obtain the invention as specified in claim 12.

45. Claims 30, 97 and 108 are rejected for the same reasons as claim 12. Thus, the arguments analogous to that presented above for claim 12 are equally applicable to claims 30, 97 and 108. Claims 30, 97 and 108 distinguishes from claim 12 only in that claims 30, 97 and 108 provide options for continuing processing. Krishnamurthy teaches further this feature, i.e. providing an option to transform the image any way the user wishes (fig. 2, items 230-250 and pg. 5, paragraph 0053).

46. Claims 52 and 70 are rejected for the same reasons as claims 12 and 30, respectively. Thus, the arguments analogous to that presented above for claims 12 and 30 are equally applicable to claims 52 and 70. Claims 52 and 70 distinguish from claims 12 and 30 only in that they have different dependencies, both of which have been previously rejected. Therefore, prior art applies.

47. Claims 13, 31, 53, 71 and 109 are rejected for the same reasons as claim 9. Thus, the arguments analogous to that presented above for claim 9 are equally applicable to claims 13, 31, 53, 71 and 109. Claim 13, 31, 53, 71 and 109 distinguish from claim 9 only in that they have different dependencies, all of which have been previously rejected. Therefore, prior art applies.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kathleen S. Yuan whose telephone number is (571)272-2902. The examiner can normally be reached on Monday to Thursdays, 9 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571)272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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